



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,403	03/12/2004	Bartley K. Andre	APL1P302/P3262	7320
22434	7590	08/05/2005	EXAMINER	
BEYER WEAVER & THOMAS LLP			GUSHI, ROSS N	
P.O. BOX 70250			ART UNIT	
OAKLAND, CA 94612-0250			PAPER NUMBER	

2833

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/799,403

Applicant(s)

ANDRE ET AL.

Examiner

Ross N. Gushi

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/4/05
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Numerous details of the actual structure of the connector have been omitted from the disclosure. As one glaring example, the details of how the redundant contacts would actually be configured are omitted. Applicant states that "the contacts may be configured as a linear array of pins or pad." Specification Col.11, line 1. The drawings cryptically show a split black line leading from the contacts (see figure 5A). It is a mystery whether the contacts would be configured as separate contacts individually connected to separate power lines (something like how the signal contacts 4,5 in Davis are configured, see Davis figure 7), or whether the contacts would be two pairs of contacts (and two power wires) including bifurcated tines, comparable to those taught by the Davis as power contacts 6, see Davis figure 9, or whether a single power line would be attached to a single contact with 4 tines as suggested by Eichhorn et al ("Eichhorn"). Applicants' cryptic statement that "the contacts may be configured as a linear array of pins or pad" seems to suggest that none of these alternatives are

contemplated, but rather some other unknown configuration using "pads" is preferred. The cryptic lines in applicants' figures seem to suggest a split or spliced wire. Another example of critical information that is omitted is that there is no suggestion as to how the contacts are secured to the housing. Are they embedded in the housing, or press fit, or something else. Are wires attached to the contacts? If so, how are the wires attached? If not, how is the connection made. Are the contacts of the receptacle attached to the circuit board? If so, how? If not, how is the connection to the board made? The preceding are merely examples of numerous critical details as to which there is no suggestion in the disclosure. Nevertheless, the claims are analyzed on the merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-13, 21, 22, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis in view of Eichhorn et al. ("Eichhorn").

Regarding claim 7, Davis discloses an arrangement comprising receptacle (see e.g. figure 3) 1 including outer conductor 38 and inner electrodes 6, 4 (including center electrode 4), a plug (see figure 1) including outer shell 37 and electrodes 6,

an outer shell (37, 38); and an inner electrode disposed within the outer shell, the inner electrode having contacts 4 and redundant power contacts 6 that are

electrically isolated within the same plane, the redundant power contacts being laterally spaced apart equally relative to a central axis.

Regarding the limitation in the preamble that the connector is a "DC" connector, the limitation has been treated as a non-material limitation because the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause and the preamble merely states a purpose or intended use of the subject matter. Kropa v. Robie and Mahlman, 88 USPQ 478 (CCPA 1951).

Davis does not show the connector as being reversible (due to the polarizing feature of the "cut corners" as seen clearly in figure 2). Eichhorn discloses reversible plug 6 and socket 5, where the polygonal shape of the mating connectors allows the plug to be mated in 0/180 degree configuration (i.e. the plug is reversible). At the time of the invention, it would have been obvious to configure the Davis connectors to be reversible, by substituting the cut corner polarizing configuration as shown in Davis with the reversible symmetrical polygonal configurations as taught in Eichhorn. The suggestion or motivation for doing so would have been to enable use of the connector in a simple manner without the user having to pay attention to the orientation of the connector, for those applications where such simplification is desirable, as taught is Eichhorn, col. 2, lines 15-25.

Regarding claims 1 and 4 and the particular dimensions, claimed variations in relative dimensions, which do not specify a device which performs or operates any differently from the prior art, do not patentably distinguish applicant's invention.

Gardner v. TEC Systems, Inc., 725 F.2d 1338 (Ct. App. Fed. Cir. 1984). At the time of the invention, it would have been obvious to vary the Davis axial contact distance as desired and such variations would have been a matter of engineering design choice without patentable significance.

Per claim 5, Davis does not use locking mechanisms.

Per claim 6, Davis uses retention mechanisms (see e.g. the dimples in the shell in figures 1, 5, 6, 7, etc. and the cantilevered tongues in the shell shown in figures 3, 4, etc.)

Regarding claim 22, and the limitation that the height is smaller than the width, claimed variations in relative dimensions, which do not specify a device which performs or operates any differently from the prior art, do not patentably distinguish applicant's invention. Gardner v. TEC Systems, Inc., 725 F.2d 1338 (Ct. App. Fed. Cir. 1984). At the time of the invention, it would have been obvious to vary the height to width ratio as desired and such variations would have been a matter of engineering design choice without patentable significance.

Per claim 23, the contacts are capable of doing the claimed functions.

Claims 8-13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis and Eichhorn as discussed regarding claims 1 and 4-7.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis and Eichhorn as in claim 7 in view of Arai. To the extent that it may be ambiguous in Davis whether there are holding flexures and recesses, Arai discloses well known retention structures of holding tongue 344 engaging opening 422 (note that

Art Unit: 2833

although undiscussed in Davis, it appears very likely in Davis that the concave dimple on the cantilevered beam on the outer shell 38 engages with the convex dimple on shell 37). At the time of the invention, it would have been obvious to include well known tongue and recess structures in the Davis shells as taught in Arai. The suggestion or motivation for doing so would have been to strengthen the coupling force of the mating connectors and ensure good electrical connection between the connectors (Arai col. 8, lines 65-67).

Claims 16-20 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis, Eichhorn, and Arai as discussed regarding claims 1-15 for the reasons given above.

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis, Eichhorn, Arai, and Shi et al. ("Shi").

Regarding the number and arrangement of flexures and recesses, Shi discloses additional flexures and detents (113, 114) engaging recesses 12'. At the time of the invention, it would have been obvious to include well known tongue and recess structures in the Davis shells as taught in Arai and Shi. The suggestion or motivation for doing so would have been to strengthen the coupling force of the mating connectors and ensure good electrical connection between the connectors (Arai col. 8, lines 65-67).

Response to Arguments

Regarding the 35 USC 112 first paragraph rejection, applicant argues that as shown in figure 5A, the pads are connected to the pcb via wires or other conductors (remarks page 7, 6th par.) . The examiner pointed out the cryptic figure in the original

rejection as part of the evidence that the device is not enabled. The figure does not give any details as to how the redundant contacts would actually be configured.

Applicant points to various parts of the specification which give conflicting and ambiguous indications of how the connector might be constructed. For example "the post may include a wire embedded therein" (remarks page 8, first par.). No indication in the specification is given as to how this feature might be configured, or made, or constructed so as to actually communicate with the pcb somehow is given.

Applicant points to various statements in the specification (remarks page 8, par. 1). None of these statements address the concerns raised in the rejection.

Applicant argues that each set of contact pads is connected to a separate terminal or post which is connected to the pcb. Page 8, second paragraph. This is in direct opposition to the position taken by applicant on the preceding page where applicant argues that "contact pads 226 are coupled to the PCB via wires" page 7, par. 6. It also conflicts with the very next paragraph where applicant argues that "the contact pads and wires associated therewith are molded with the insulating member" page 8, par3.

In all of applicant's arguments, the examples pointed out in the 35 USC 112 first paragraph rejection are not addressed. Applicant's examples do not clarify whether the contacts would be configured as separate contacts individually connected to separate power lines (something like how the signal contacts 4,5 in Davis are configured, see Davis figure 7), or whether the contacts would be two pairs of contacts (and two power wires) including bifurcated tines, comparable to those taught by the Davis as power

contacts 6, see Davis figure 9, or whether a single power line would be attached to a single contact with 4 tines as suggested by Eichhorn et al., etc.

Finally applicant argues that the “the concerns of the Examiner seem trivial as the structural details are hardly necessary and within the range of skills” Page 8, par. 5. The examiner accepts this argument as an admission that the structural details have not been supplied and the applicant is relying on one skilled in the art to be able to supply the details. The examiner is not persuaded that enough details are given to enable the device.

Applicant argues that the Davis contacts 6 are not redundant. The examiner maintains they are. Redundant means “characterized by similarity or repetition.” Merriam Webster's Collegiate Dictionary, 10th ed. 1998. Even using applicant's narrow definition of “redundant” the contacts are redundant, they perform the same function, in particular they are power contacts.

Applicant argues that Davis teaches away from the connector being reversible. Remarks page 9. The examiner disagrees. Extolling the virtue of one structure does not teach away from the use of a different structure. In re Dance, 48 USPQ.2d 1635 (Ct.App.Fed.Cir. 1998). In this case, Davis does not state that the structure of Eichorn should not be used and never indicates that the structure of Eichorn is not desirable. Davis discloses a non-reversible connector and Eichorn supplies a teaching of why it may be desirable to make a connector reversible. The examiner's response to applicant's arguments on page 11, last paragraph are the same.

Regarding the particular dimensions, applicant argues that the claimed dimensions are not obvious. Remarks page 10, first par. The examiner disagrees. First, Davis does not state the dimensions and it may well be that in practice the Davis connector has the claimed dimensions. Davis never indicates that there are limits to increasing or decreasing the size of the connector and there is no apparent reason why there would be any problem with increasing or decreasing the size of the connector within the typical ranges of connectors. As noted above, the examiner maintains that possible variations in the size of the connector (within reasonable bounds) would not be patentably significant.

Applicant argues that the prior art does not teach detents or flexures. Remarks page 12. The examiner maintains that Arai discloses well known retention structures of detents and flexures as noted above (see holding tongue 344 engaging opening 422 in Arai and in Davis the concave dimple on the cantilevered beam on the outer shell 38 engages with the convex dimple on shell 37).

In applicant's response filed 7/29/05, applicant points out yet another inconsistency in the specification (page 7, first paragraph of the response to arguments), in particular pointing out that the specification states that each set of contact pads is connected to a separate post yet the receptacle may have only one post. This position is simply inconsistent on its face. Applicant further argues that each set of contact pads is contacted to a post which is integral with the outer conductive shell. This would make the device inoperative as far as the examiner can tell (or alternatively applicant has not shown clearly how this would actually be done).

However, applicant's examples do serve to illustrate of how the disclosure contains numerous ambiguous or conflicting or indefinite statements such that applicant can point to this or that sentence to find support for various positions any number of which conflict with other statements in the specification.

Applicant argues that the upper and lower contact pads are connected by wires as shown in figure 5A (page 9, last paragraph) and makes further assertions about these wires. The examiner requests that the portions of the specification identifying the lines as wires and supporting applicant's further assertions be pointed out so that the examiner can confirm this assertion.

Applicant's remaining arguments have been considered and are not persuasive and have been addressed above.

Conclusion

Applicant's amendments (in the amendment filed 4/20/05) necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

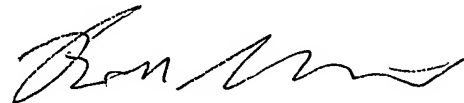
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2833

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ross Gushi whose telephone number is (571) 272-2005. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Paula A. Bradley, can be reached at 571-272-2800 extension 33. The phone number for the Group's facsimile is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**ROSS GUSHI
PRIMARY EXAMINER**